**T06D05 - Design: Investigation of the kinetics of a reaction**

Name………………………………………

Now we are at the end of the topic you should all be familiar with the study of reaction kinetics. You also used a SpectroVis in the last experiment in order to determine the concentration of various solutions.

With this in mind I would like you to choose a chemical reaction and plan an experiment to investigate its kinetics.

This is a task that may well take you several hours of lesson time.

For a few short videos on kinetics reactions, visit the following wikispace by former ECA Chemistry Teacher T.A. Hennard:

<http://thennard.qataracademy.wikispaces.net/Chemistry+11+%2809-10%29>

|  |
| --- |
| **1. Defining the Problem and Selecting Variables** |
| C P N n/a • Independent Variable  C P N n/a • Dependent Variable  C P N n/a • Research Question (using variables)  C P N n/a • Literature Values (or statement of none)  C P N n/a • Hypothesis based on Literature Values  C P N n/a • Brief explanation of the experiment |
| ***C = 2 P = 1 N = 0*** |

|  |
| --- |
| **2. Controlling Variables** |
| C P N n/a • Control Variables  C P N n/a • Justify the need to control / effect on results  C P N n/a • Measurement of the control  C P N n/a • Quantitative vs Qualitative Control |
| ***C = 2 P = 1 N = 0*** |

|  |
| --- |
| 3. Developing a Method for Collecting Data |
| C P N n/a • Procedure is detailed, easy to repeat  C P N n/a • Materials list is complete  C P N n/a • Units, precision, size, formula of materials  C P N n/a • Sufficient range of independent variable  C P N n/a • Appropriate # of trials selected  C P N n/a • Picture (or drawing) of apparatus  C P N n/a • Collection of Data (explanation or table) |
| ***C = 2 P = 1 N = 0*** |